US009636133B2

(12) **United States Patent**
Hall et al.

(10) **Patent No.: US 9,636,133 B2**
(45) **Date of Patent: May 2, 2017**

(54) **METHOD OF MANUFACTURING AN ULTRASOUND SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 586 days.

(21) Appl. No.: **13/874,083**

(22) Filed: **Apr. 30, 2013**

(65) **Prior Publication Data**

US 2013/0289593 A1 Oct. 31, 2013

Related U.S. Application Data

(60) Provisional application No. 61/640,560, filed on Apr. 30, 2012.

(51) **Int. Cl.**
A61B 17/225 (2006.01)
H01L 41/053 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A61B 17/320068*** (2013.01); ***A61B 17/225*** (2013.01); ***A61N 7/02*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC A61B 17/225; A61B 17/320068; A61B 2017/00526; Y10T 29/42; Y10T 29/49005;
(Continued)

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(57) **ABSTRACT**

An ultrasound therapy system is provided that can include any number of features. In some embodiments, the custom transducer housings can be manufactured using a rapid-prototyping method to arrange a plurality of single-element, substantially flat transducers to share a common focal point. The rapid-prototyping method can include, for example, fused-deposition modeling, 3D printing, and stereolithography. In some embodiments, the therapy system can include a plurality of transducer modules insertable into the openings of the transducer housing. Methods of manufacture are also described, including designing a transducer housing shell to a desired geometry and a plurality of acoustic focusing lenses integral to the transducer housing shell in a 3D computer aided design software, and constructing the transducer housing shell and the plurality of acoustic focusing lenses integral to the transducer housing shell using a rapid-prototyping method.

6 Claims, 21 Drawing Sheets